

2 Sheets--Sheet 1.

HENRY A. ELLIS.
Gathered Hems.

No. 126,138.

Patented April 30, 1872.

Fig. 1

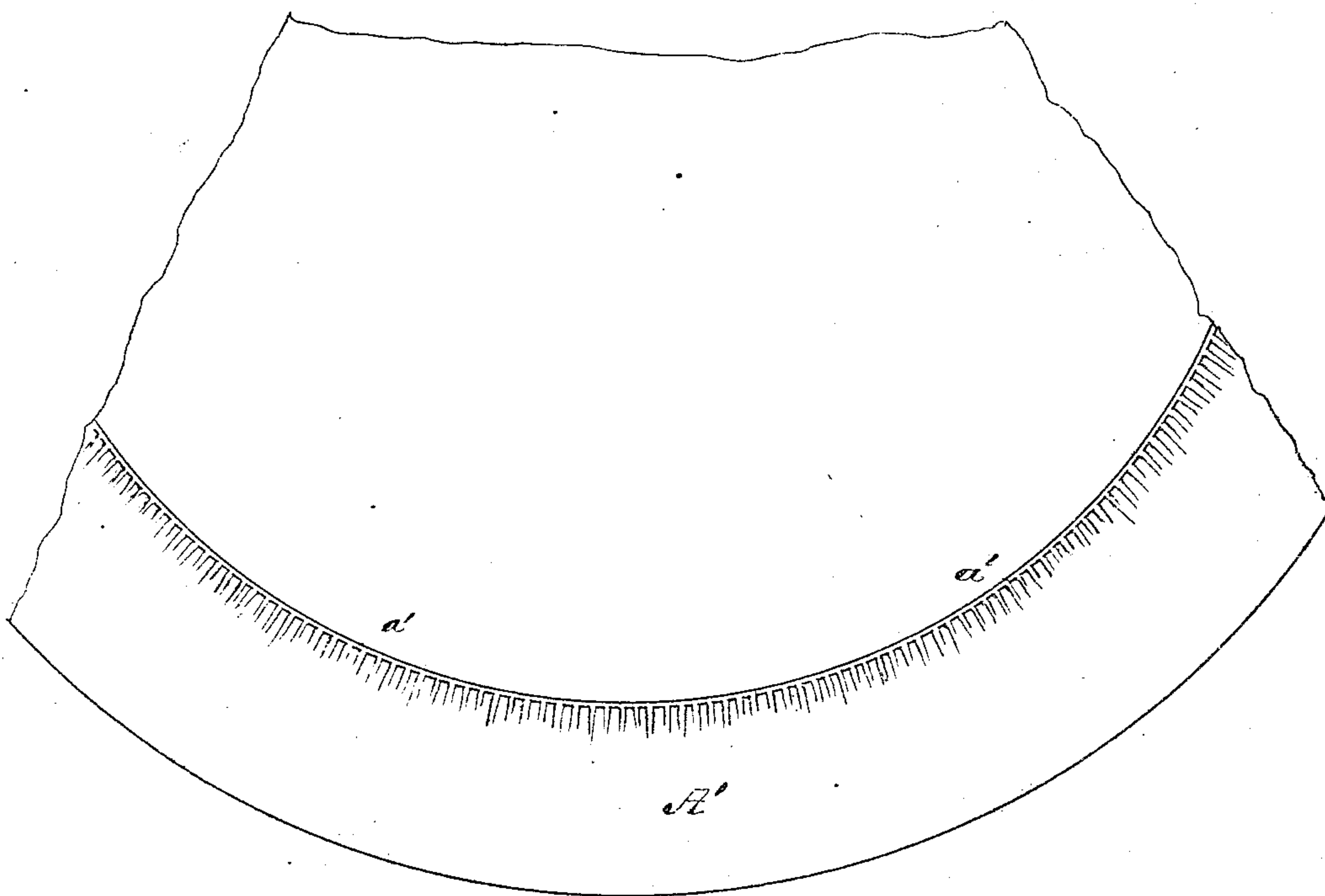
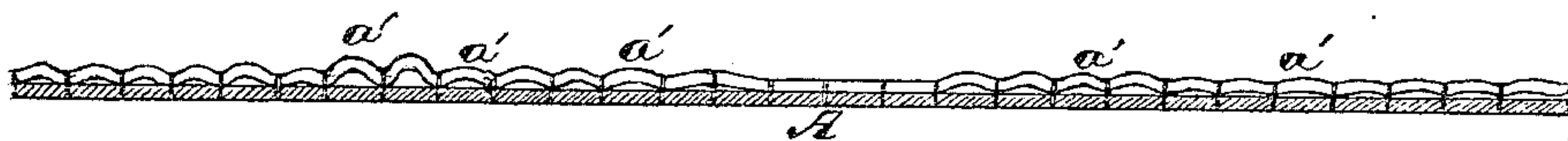


Fig 2



Witnesses
J. N. Campbell,
James Martin Jr.

Inventor
Henry A. Ellis
by
Marion, French & Lammie,

2 Sheets--Sheet 2.

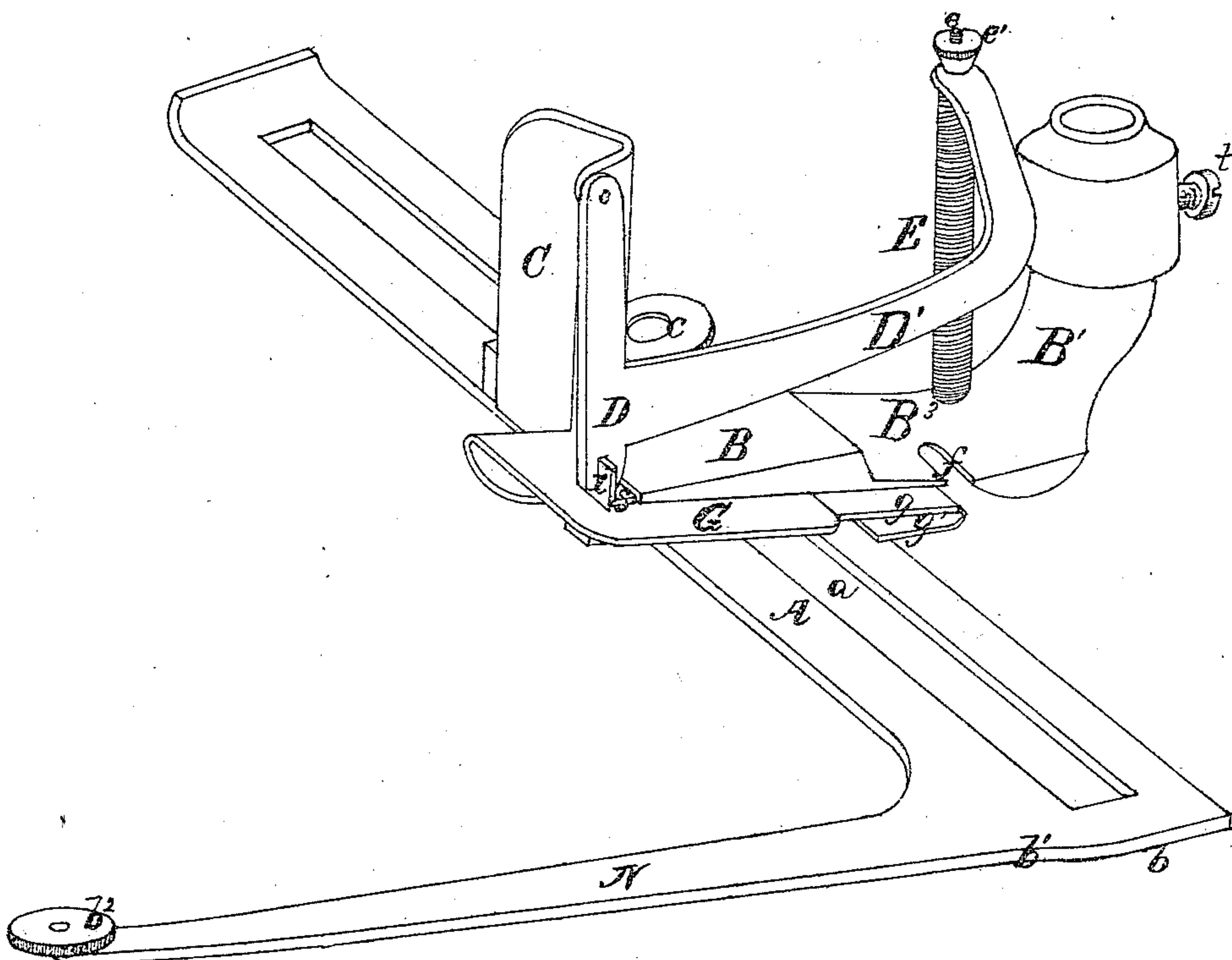
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Fig. 3.



Witnesses.
J. N. Campbell
James Martin Jr.

Inventor.
Henry A. Ellis
by
Marion, Hewitt & Lamer.

UNITED STATES PATENT OFFICE.

HENRY A. ELLIS, OF CHICOPEE FALLS, MASSACHUSETTS, ASSIGNOR TO
WILLIAM BROWN, OF SAME PLACE.

IMPROVEMENT IN GATHERED HEMS.

Specification forming part of Letters Patent No. 126,138, dated April 30, 1872.

To all whom it may concern:

Be it known that I, HENRY A. ELLIS, of Chicopee Falls, in the county of Hampden and State of Massachusetts, have invented a Gathered Hem; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1, Plate 1, shows a circular gathered hem. Fig. 2, Plate 1, is a sectional view of a gathered hem. Fig. 3, Plate 2, is a perspective view of a sewing-machine attachment which will produce a gathered hem on circular or straight material.

The object of this invention is to produce gathered hems on straight or circular material, so that the work will, when pressed, present a smooth and neat appearance, and at the same time be more durable than hems which are formed by plaiting the material as hitherto practiced.

The following is a description of my new manufacture, and also one practical form of device which will produce it.

In the accompanying drawing I have represented a hem, A', which is of a circular form, for ladies' skirts, and which is produced by gathering in the folded edge, as indicated at a'. By reference to Fig. 2 it will be seen that some of the gathers are more elevated than others, or, in other words, more cloth is taken up for some of the gathers than for others; also, that at one point the hem is not gathered at all. This I do by means of an attachment to a sewing-machine, without stopping the machine to adjust the feed of the gathering device, and without previously preparing the work by basting or otherwise.

On Plate 2, Fig. 3, I have represented a device, by means of which the work hereinabove described can be readily executed. This device forms the subject of an application for Letters Patent filed by me on the 11th day of March, 1872, and is not claimed under this application.

A represents a narrow strip of metal, which is slotted at a, and constructed with a guide, N, on one end. On this guide an anti-friction wheel, b², may be applied. Between b² and b

the edge of the guide N is curved out, as at b¹, to allow a slackness of the folded hem in line with the turning device G. B is a block, which is adjustable by loosening the binding nut c for hems of different widths. C is a standard, which is secured to the front edge of the adjustable block B, and to which an arm, C, is pivoted, so as to swing forward and backward. D' is an extension of arm D, which receives through its end a screw, e, on which a nut, e', is applied. The screw e rises from the foot B³, and around it is coiled a spring, E. B¹ is a standard, which is bored out and provided with a set-screw, t, for attaching the device to a sewing-machine. The arm D and its extension receives vibration from the needle-bar of the sewing-machine, and communicates a forward and backward motion to the turner G, which is applied to block B by means of a dovetail tenon, s, fitted into a slot in said block. To the turner G two gripping jaws or nippers, g g', are applied, between which the material passes on its way to the needle, which latter plays through notch f through the foot B³. The strokes of the turner G and its nippers are lengthened or shortened by adjusting the nut e' on screw-rod e. The gripping ends of the nippers present smooth edges, which will allow the folded edge of the cloth to be held back when desired, and the nippers to slip over it when making forward strokes.

When the device I have above described is applied to a sewing-machine, the material to be hemmed is adjusted beneath the plate A, drawn over the guide N, and its folded edge passed through the turner and between the nippers; the machine is then started, and as the work progresses the operator regulates the amount of material taken up or gathered at each stroke of the nippers, by holding back the edge of the hem, more or less during the forward stroke of the nippers. By this manipulation a piece of cloth may be gathered at one point, or not at another point, as circumstances may require. The device will work entirely automatically, or its operation can be controlled at will.

What is meant by a gathered straight hem referred to in the above description, is where the material is cut straight and the raw edge

is stretched, more or less, so that the folded edge is longer than the body of the work. I gather in this stretched edge precisely as I gather the edge of the circular or gored work, so that when the straight hem is completed and pressed down the folded edge thereof will lie smooth.

Without confining myself to the device for

gathering and hemming herein described, I claim—

As a new article of manufacture, the gathered and hemmed work herein described.

HENRY A. ELLIS.

Witnesses:

J. N. CAMPBELL,
JAMES MARTIN, Jr.